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CHATHAM, N. Y.
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Introduction.

The author of this work, gives his individual experience here without reference to other works. He says what he has to say plainly, honestly, and with a view to benefit those who read it. He deals in no ambiguous terms or phrases, and does not attempt to be profound, and consequently prosy. This work has the merit of originality, whatever else it may lack. It is especially adapted to beginners. If old "Chicken Cranks" can learn anything from these pages or even be amused, the writer will be satisfied. One man cannot know it all. The knowledge here obtained is not borrowed. It is the result of years of application. You will find no *theories* in this work. Not even a little unfledged one. It is intensely practical, but not methodical. It abounds in *facts* from *my* standpoint, and facts are what you are after. Read it carefully. Experience will prove or disprove its merits.

THE AUTHOR.





The A B C of Poultry Culture.



Attention to Details Necessary.

Attention to details is the golden key which opens the door and makes poultry breeding a success, whether for pleasure or for profit. Of course, experience is all-important, and we cannot succeed in any undertaking without such schooling. Experienced breeders who read these lines, have been necessarily between the upper and the nether millstone as beginners, and know what experience costs. Some of the lessons in the school of experience are hard and trying, vexatious and costly. Yet success can only be attained in poultry culture, as in other vocations of life, by an unflinching courage, a rigid devotion, and a resolve to profit by the teachings of the past.

The sea of poultry culture is strewn with the wrecks of failure. The poultry graveyard is a large one. But there are no headstones there. There are no marble shafts to mark the burial place of departed hopes. No tender and loving hands strew flowers over the dear departed. And no record is made of the birth or final end of the scheme to run a thousand hen ranch by a man who tackled the industry because he saw lots of money in it, with little work and less experience.

Poultry breeding is a trade, a business, an *art*, if you will. And, when it comes to breeding down fine, for form, for comb, for legs, for feather; when it comes to making a new breed or improving an old one by out-crossing, poultry culture should be classified as one of the *fine arts* without any if's or and's. I believe some men would never be successful with poultry in any event, in any place or condition. They were not *born* that way. They lack

adaptability. Some men seem to be fitted by nature for hotel keepers, and they manage hotels with ease and profit, while others make a dismal failure of it. And there are few men but that imagine that they could keep an hotel "just as easy," just as there are people who think they can make a success of breeding fine fowls without any experience or adaptability for the work.

Another requisite, and a very important one, too, is a determination to succeed, and a will to hold on through all discouragements. Some call it "grit," others "backbone," others "nerve." But, even with the stoutest will, and most resolute determination, a man will fail if he is unfitted for the work. And when he discovers himself in this predicament, the best thing to do is to give it up. And, when he gives it up he should acknowledge that he has not the necessary capabilities—that breeding fowls is not his *forte*; and not declare, as is usually the case, that the poultry business is a fraud and a humbug, and that there is no profit in it. If a person really loves fowls, and thinks the care of them a pleasure instead of a burden, then success may be attainable if a *profit* is the end and aim. The one who keeps a few fowls for pleasure is not to be taken into consideration in considering the requisites of a successful breeder. The man who keeps fowls for pleasure only, may not know much about them, but if he persists in keeping them he will either develop into a genuine fancier, or keep them just long enough to become thoroughly disgusted with them, and clear them off his place. This action will result from a neglect of details, however small, and be proof of incompetence to master the common sense methods required in a poultry yard.

Common Sense Methods in Breeding.

Allow me here to suggest that in no profession, occupation, or industry are *common sense methods* so essentially requisite as in the poultry yard. And, nine times out of ten, failure is a result of a neglect of these methods, by the substitution of those that are artificial. The farther we get from nature, the more liable we are to failure, and the more we violate nature's laws, the more certainly does speedy failure await us.

Good stock; good feed; pure water; good care; clean houses; no lice; no drugs. These are the main requisites to success in poultry culture, whether carried on for pleasure or profit. Avoid all kinds of condition powders warranted to make hens lay, and all other humbug preparations of like character. Avoid all drugs, tonics and "sure cures" of whatever kind.

Years ago, when I knew more about poultry than I do now, I imagined that sulphur and cayenne pepper and tincture of iron, and castor oil and condition powders, etc., etc., were necessary to success ; that if the hens did not lay, they should be *made to lay* by dosing them with advertised nostrums. And when a fowl showed signs of being "dumpy" or ailing I at once gave it medicine, and —the fowl usually died !

Doctoring Fowls.

"Doctoring" fowls is time and money wasted. If I ever cured a fowl of any affliction I do not know it. Of course a few got well but they might have got well had I let them alone. And I believe I have killed scores of good birds by "doctoring" them ; by attempting to do something I was entirely ignorant of as far as the cause or the proper remedy to be employed is concerned, if there are any genuine remedies, which I doubt. The use of medicine and the practice of "doctoring" the human family has proved a failure. The testimony of the best physicians of the world, the most scientific and learned men, is to the effect that drugs cannot be relied on to *cure* any disease ; though they do sometimes *relieve*, but never *cure*, and that, as a rule, their employment is injurious. At the same time, civilized nations consume the drugs, and the more highly civilized they are the more drugs they use. Uncivilized races either use nothing when they are sick, or depend upon simple roots and herbs for medication, or upon the power of their "medicine man" to banish disease and cure the patient by incantations and accepted supernatural legerdemain. I honestly believe that if every "patent medicine" factory in the United States and the world, could be destroyed and never resurrected it would be of immense benefit to mankind, physically, mentally and morally. And along with these medicine factories should go the "chicken medicines," the condition powders and all the other humbug preparations warranted to "make hens lay" and to cure all chicken afflictions.

Beware of drugs and condition powders in the poultry yard! Nature does not demand such things. When you use them you violate nature and practically weaken, debilitate and finally destroy entirely the vitality of your birds. It took me years to learn this. And if others will profit by my experience they will save money, time and much worry. A fowl which has to be pampered with drugs to keep it on its feet is worthless. If a fowl is very sick drugs will not save it, but hasten its demise. If only slightly ail-

ing, the bird will get well without medicine. Decapitate rousy fowls and cremate their bodies. If the fowls have cholera, remove the well ones to a clean location, and thoroughly deodorize and clean up the old house and yards. Remove the sick and ailing birds to distant quarters, feed them on boiled rice and give them scalded milk to drink for a few days, and they may recover. If they get worse under this treatment, kill them and cremate their bodies. And so treat all afflictions to which fowls are subject. This is the common sense way of managing them.

The man with a bad liver, or the one who labors under the hallucination that he has this, that or the other disease and is constantly gulping down medicines from the doctor, or the stuff labled "patent," will, if he keeps fowls, naturally believe that they need medicine, just as he imagines he needs it, hence he will dose them. And a great many other very good and intelligent people, who really do not believe much in the virtue of drugs, will dose their fowls when sick or ailing.

Frankly I have no faith whatever in medicine for sick fowls: and furthermore I believe that thousands of fowls are killed every year by drugs, just as there are thousands of human beings sent to untimely graves by the same agency. One trouble is, that the doctoring of fowls is purely guess work; we drug for *imaginary* afflictions. Such a thing as a correct diagnosis is impossible. Such a thing is rarely possible among human beings. How altogether improbable, then, in the animal kingdom, among fowls which cannot even mutely express the location of their ailings! We imagine a sick fowl has this or that affliction; and we imagine that a certain drug, or oil, or decoction is good for the complaint. It is all guess work from the first to last. And so we go on and kill our fowls with drugs, just as the doctor hurries his intelligent patient off with similar compounds.

After long experience in breeding fowls I have come to the conclusion that sickness and afflictions among fowls in the poultry yard, are the result of bad management: or because we are breeding fowls too fine—breeding them for the show room, instead of for hardiness, vigor, and strong constitutional attainments. Afflictions among poultry—fowls never have diseases—may be the result of negligence, ignorance, or laziness on the part of the breeder in many cases. The breeder who knows how to take care of his fowls and does it, may expect vigorous birds and few sick ones among them. Afflictions among fowls are not natural. They never contract afflictions in a state of nature; their only enemies

are the gun, or the "varmints" which prey on them, their eggs, or their offspring. Yet this is no argument that your fowls should roost on the fences or in the tree-tops. But, when a fowl gets sick we are inclined to doctor it; and more especially so if the bird be valuable. We think the fowl will die if something is not done for it, and so we take the risk, give it some remedy hit or miss. If the fowl survives the dose of medicine and the affliction, we give ourselves credit for the cure, and are thus encouraged to repeat the dosing process whenever the opportunity offers. Our experience is, that nine sick fowls out of every ten die if they are badly sick, and that we cannot help them because they cannot tell us what ails them; and not knowing we merely experiment, expecting a cure or not just as it happens. There is only one affliction I have ever cured, or can cure, or even try to cure, and that is gapes in chicks. The remedy I employ will be found in another place.

I happen to be very intimate with a man who poses as a fancier, although he had only a year or two experience with a few fowls. In a closet at his home he had a hundred pounds. of Quack's condition powder or egg food (?) "warranted to make hens lay and keep them healthy." On the shelves were bottles of castor oil, Douglas' mixture, tincture of iron, sulphur, quinine, calomel, salts, pain-killer, several preparations for roup, cholera, gapes etc., etc. It was a miniature drug store and all for the fowls! And, I saw him kill several of his best birds by dosing them with castor oil at night for the birds were dead in the morning. Since then he has sold off all his fowls and quit breeding, being disgusted with the business, and declaring there is no profit to him in the occupation. And this is only one case out of hundreds. Reader, do you keep a private drug store for your fowls? If so, banish it, if you want to be successful in breeding either for pleasure or profit. A friend boasted to me that he had found a sure preventive for lice and mites on fowls in *nux vomica*. He fed it to them in large quantities, he said, and it did not hurt them. Besides, it kept them healthy! Think of eating *nux vomica* poultry and eggs! And, may not *nux vomica* be present in the condition powders and other preparations sold to "make hens lay," to "keep them healthy," etc., etc?

It is noticeable that with the increase of poultry diseases, poultry disease remedies increase. And the more remedies the more diseases. This is a natural consequence, because these medicine advertisements are so seductive and enticing that hundreds buy

the so-called remedies under the impression that, if they do no good, they can do no harm. Again, we repeat, beware of all manner of drugs, powders, and preparations for fowls other than natural food. It is against nature to use them.

Keeping One Variety.

In commencing to breed fowls start with one variety, especially if your means are limited and your time also. Purchase the best fowls your purse will allow. When you have thoroughly mastered the business of keeping a few, at a profit, and have the time and the room and the money to branch out further, and want to do so, start a few more yards of *the same breed you are already keeping*, if you like them. My advice to beginners is, not to begin until you have settled upon some fowl you are certain you will like. Many a failure in poultry raising is due to keeping more varieties than a man can attend to without giving up other occupations and making a specialty of the poultry business. And this requires money! To purchase stock, build houses, make runs and provide the necessary machinery for running a poultry farm with about eight varieties, will cost \$500 to \$1,000, according to the style of the improvements.

With one breed the expense would be much less, while the profit might be much more. Besides, the labor would be much reduced, which is an important item. With one breed there is no possible danger of a cross, and more average good birds can be raised with 40 hens of one breed than with 40 hens of 8 different varieties. This may seem a strange proposition; nevertheless it is a true one, as any experienced breeder will attest. And if a breeder is so situated that his fowls can have free range, leaving each flock to roost in its own house, (which is easily done,) the work of caring for a thousand fowls of one breed is not equal to that of caring for 40 or 50 fowls of 8 different varieties or breeds. This we know from experience. Fowls kept in separate runs require different feed and different attention, and the person who thinks there is no labor attached to keeping several varieties, and keeping them rightly, will find out his mistake when he tries it.

The men who have made money in the poultry business are the "one breed" men. Year after year they have stuck to one breed, and by careful selection in mating and breeding have made the one breed famous and have gained for themselves a reputa-

tion to which breeders of several varieties can never attain. If a person desires to keep a number of varieties and breed on a large scale, making market poultry and eggs a feature, success may be attainable. But, as a rule, large establishments with a variety of fowls do not pay. Even broiler establishments are risky ventures, and few have been successful. A few, which are managed on strictly business principles with plenty of capital to back them and which use artificial methods of incubation and rearing the chicks and which run business day and night every day in the year, make some money. But in these establishments everything is utilized and made to pay a profit. The feathers, manure and everything that can be sold is sold. The feed is bought in large quantities at reduced rates, and the feeding is careful, systematic and with an eye to the best results.

But few men, however, have money to run big establishments, or they do not desire to do so, or have not the necessary experience for the work. And managing a big establishment or a small one means work in proportion, early and late, Sunday and every day. There are few idle moments for a breeder, and the writers who picture poultry raising in such rosy colors making it appear a holiday recreation, are doing a positive injury to the industry. We do not know of a business, unless it be editing a daily newspaper, that requires so many hours of application, so much hard work as there is connected with keeping several varieties of fowls, raising the chicks and attending to the many details necessary. I repeat here and emphasize it, that there is really more pleasure, more profit, less work and a much greater chance to gain fame as a breeder by keeping one variety than there is by keeping half a dozen or twenty varieties, and I would not advise more than two at the most, these to consist of one of the larger and one of the smaller or non-sitting breeds. If a person has free ranges, he can allow one flock to run at large every day. But if he has not the range of course the fowls must be kept yarded.

When a breeder gets a reputation for having the best of a certain breed, it is no trouble for him to sell fowls and eggs at a very profitable price. And the specialist *always* obtains better prices for his fowls and eggs than the man of many breeds. It is not difficult for the well-known specialist to get from \$25.00 to \$100.00 a *trio* for his birds, while the man of many breeds is glad to take from \$5.00 to \$10.00 for the same kind of stock. But the specialist has higher grade birds, as a natural consequence, and is entitled to a higher price.

Prices for Pure-Bred Fowls.

Speaking of high prices leads me to remark that the average man, the amateur, is often astonished at what he thinks is a terrible big price for a trio or a pen of pure bred fowls, the prices ranging as they do from \$5.00 per trio up to \$50.00 and from \$12.00 to \$100.00 per pen, according to the quality and the reputation of the breeders. The big breeder with a big reputation always gets a great deal more for his fowls than the small breeder with only a local reputation, notwithstanding the fact that the small breeder may have just as good birds as the big breeder. In fact, we have known the big breeders to hunt around among the yards of smaller breeders for *exhibition birds*. And this is by no means a rare occurrence.

But about the big prices. As a matter of fact, the prices asked for pure bred fowls are not excessive—are not nearly as high proportionately as the prices asked for fine breeding hogs, cows, bulls, sheep, and other blooded live stock. Good breeding pens of pure-bred fowls can be purchased—5 hens and cock—for \$15.00 and first rate to first class pens at \$25.00 according to breed. The \$15 pens would not of course, be the highest scoring birds. But they would be pure and just as good for the farmer for general use as the best. If he wanted to keep all one variety he could, in the course of a couple of years by judicious selection, *breed his birds up* to rank with the best. At the same time it is wise to buy the best if possible, for the best is more satisfactory to the owner. Besides, a man feels better when he can say: "My birds are of the best." Still, I repeat, it is not always the highest price birds which are the best. Suppose you pay \$10.00 or \$15.00 for a trio of good fowls. The first season you should raise one hundred birds from this trio. Putting it at a low estimate I will say you raise fifty birds from the trio you paid \$10.00 or \$15.00 for. Any one of these birds ought to be worth \$2.00 each, and some of them might be extra fine and sell for \$5.00 to \$10.00 each. I know a man who paid \$12.00 for a trio of Buff Cochins, and who raised thirty birds from them the first year. After the breeding season he sold the old birds for more than they cost him, and out of his thirty head of young stock he sold three cockerels for \$10.00 each, and a number of pullets at \$5.00 each. But suppose you only get one dollar apiece for your birds, don't you see there is three times the profit in them there is in common stock, and it costs no more to feed them? And, if you bring a coop of pure bred fowls to

town, you can sell them readily at one dollar apiece and sometimes for more. And if you buy a setting of eggs and get but three chicks from them, you are ahead even if the eggs cost you \$3.00 per setting. The truth is, pure bred fowls are not high in price. No man ever bought a trio or a pen, and *managed them right*, but what he more than got his money back. Certainly, it costs a little something to start, but after you get the start there is a continual increase and in a little while you have hundreds of dollars worth of fine birds, and all out of the trio or pen you bought at a comparatively low price, but which you thought a big price. No, purely bred fowls are really not high in price.

To return to the subject of one breed, I repeat, if you wish to gain a reputation as a breeder, stick to one variety, study it thoroughly and breed your birds up to the highest point of excellence without detracting from vigor and hardiness. Do not breed too fine for feather, but for general good qualities. And if you are anything of an artist in your line, you can so arrange as to not inbreed, and yet not be obliged to go to other yards for fresh blood. You will thus have a strain peculiarly your own ; one that will be sought after, and which will give you profit as well as pleasure.

Personal Attention Required.

I wish to impress upon the mind of the reader, the absolute *necessity* of giving his fowls his personal attention. Spend your spare time with your fowls. Take a copy of the American Standard or the Philosophy of Judging into the yard or chicken house with you, and compare your fowls with the points there laid down. And do this until you get the Standard description of your breed by heart. I see no reason why a breeder should not learn to judge his own fowls as well as any judge, and much better than the judge who never bred that variety. Every breeder should know his own birds and be able to score them accurately before taking them to the show. And yet very few breeders are able to do this because they have neglected the very essential part of their education. The idea of a man breeding fowls for a lifetime, or even for a number of years, and then not being able to judge or score them, is an anomaly not common with other trades, professions or arts, whose followers are supposed not only to have learned the A B C but the X Y Z of that to which they have been for years devoted. It is just as necessary for a breeder to learn how to judge and score his birds, as it is for him to learn, personally, how

to conduct any other business which he may be engaged in. And, if he lacks in this most necessary and important part of his education as a fancier, he is certainly not competent as a shipper of stock, for this reason: Suppose a purchaser wants a 90 or 95 point bird; unless the breeder is competent to score such a bird he will be forced to call in a competent judge to make out the necessary score card, or cards. If he does not do this, it is hit or miss. He selects the bird he *thinks* will score the number of points designated, and ships it. It is all guess work, and the probability is that the purchaser is ignorant on this point also, and accepts the bird on its merits as set forth by the breeder. The bird *may* score 95 and it *may* score 85. And yet the breeder will be acting honestly and squarely, with no intent to deceive or misrepresent. The purchaser, however, may be deceived and not get what he paid for, and yet the transaction be honest on the surface but dishonest in fact, because of the lack of the breeder's knowledge of judging and scoring his own birds. I hope breeders will see this fault in its true aspect and hasten to school themselves in judging, which is *the* important part of breeding. Anyone of intelligence can learn to feed fowls in a short time, but *knowing* the birds thoroughly and, therefore, being competent to judge and score them, is another thing.

For these reasons the breeder should give his *personal* attention to his birds, and never trust them to a servant which means disaster and ruin. I knew a man who was an enthusiastic poultryman. He had the means to gratify his ambition in this direction, and he put up a number of houses with half acre runs enclosed in wire for each variety of fowls. He paid large prices for his birds and had a splendid start. For a while everything run smoothly, because he gave the fowls his personal attention. He fed and watered them, looked after the eggs and the sitting hens, and success was within his grasp. But the novelty wore off, he gave his fowls in charge of a negro servant while he either amused himself in other ways or attended to his legitimate business in a city store. Soon disease decimated his yards, mites and lice swarmed in the poultry houses; his young chicks were drowned by the rains, eaten by vermin, and destroyed in other ways. Finally the man disposed of what few birds he had left and abandoned the business in disgust after spending hundreds of dollars in fixing up for it. With a country home, well adapted for poultry raising, with money and facilities to advertise the business and make it a profitable success, he allowed it to become a miserable

failure by gross and inexcusable neglect on his own part—that of *personal* attention. Don't trust your fowls to someone else to care for at any time, unless because of sickness or unavoidable absence from home; it makes no difference if that person is a most intimate trusted friend. I once gave a hundred fine birds over to the charge of a next door neighbor for two weeks in July, while I went to a mountain resort. The neighbors had seen me feed and attend to the fowls for more than a year and they—the man and his wife—declared that they would give them the same care I did. When I returned, dead fowls were found in each of the half dozen chicken houses, and nearly all the birds were ailing. The cholera had got among them. By hard work I succeeded in saving 20 birds out of the hundred. Not one of the houses had been cleaned during my absence, nor had the fowls been fed and watered regularly, as I afterwards learned. I did not blame the neighbor but myself for the loss. The man and his wife had been raised on a farm and thought they knew all about fowls and did the best they could. This taught me a lesson, and I give the circumstance here so that others may profit by it. The wealthy man who keeps fowls for pleasure is able to have an experienced breeder to care for them. But persons of limited means must give their fowls *personal* attention or they will surely fail.

Incubation—Brooders.

The beginner is always anxious to know all about incubation and the care of chicks. And as this is a necessary feature of poultry raising I give my plan, which has been uniformly successful.

With artificial incubation I do not propose to meddle or attempt to show *how* to hatch chicks by steam or hot air. When a person buys an incubator all necessary instructions will be given with the machine, and only by following such instructions will success be attained, in any degree. Theory and practice are different things altogether, and the instructions I might give on artificial incubation might not fit the machine bought by the reader of this book. And he might follow my instructions thinking I knew more about artificial hatching than the maker of the machine, and so ruin the eggs, or get a very small hatch.

And right here I advise beginners, and others, not to pay any attention whatever to the written chapters in books about artifi-

cial incubation, as no one can profit by theory. And it makes no difference how good the machine, or how explicit the instructions, a person can only attain success by *experience* and that alone. You can read *how* a steam engine is made, but can you make one? Some persons will fail with all machines; others will have fair success with any machine. It depends upon the person, more than the machine. And so, I leave the subject of artificial hatching to the makers of the incubators, who ought to be competent to tell how to manage them.

My aim here is to teach the hen method. And, although I have used incubators of various makes including home made ones, I prefer the hen where from 50 to 200 or 300 chicks only are wanted. For getting out winter chicks, and as an auxiliary to the hen, incubators are the thing. When a person has piles of eggs and no hen wanting to sit, an incubator comes handy. And if a twenty or a thirty per cent hatch only is obtained, you are that much ahead, because those chicks when grown may be worth \$30 to \$50. If a fifty to eighty per cent hatch is the result, so much the better. If I could find an incubator that would hatch just as good as the hen will hatch under the best conditions I would prefer the incubator. But as I have never found such a machine, my preference is for the hen with a brooder to keep the chicks in.

But when it comes to taking care of the chicks, the brooder is the thing. I use brooders in preference to hens in raising the chicks. The hens will beat the incubator in hatching but when it comes to taking care of them I had rather manage one hundred chicks in a brooder than attend to two or three hens with chicks. Besides the brooder-raised chicks have no lice on them, are not troubled with mites, are protected from storms, are not killed by the feet of the hen in the nest, grow faster, thrive better, are gentler, and bear handling when grown. In bad weather I keep the brooders in the house. In bright, sunny weather they are out of doors. When a month old I allow the chicks to run at large part of the day and give them full liberty when three month sold.

I believe the brooder plan is growing in favor. It is not only sensible, convenient and handy but is a great saving in the mortality of chicks. Out of two hundred chicks cared for in the brooders last season, I did not lose five per cent by reason of disease—not five in a hundred. A few weakly ones died, as a natural consequence. A few were killed by rats outside. But just think of the mortality that would have resulted had these two hundred

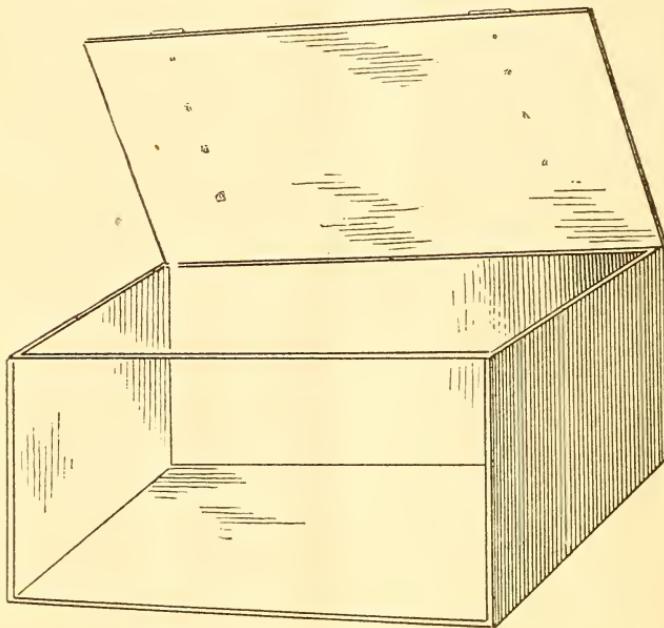
chicks been running with ten hens, allowing twenty chicks to a hen which is enough for any hen to care for! Some persons, I know, insist on allowing a hen to have thirty to fifty chicks, but it is a mistake. The hen cannot cover so many. And those outside get chilled, have some disease in consequence and die. A hen should only have as many chicks as she can conveniently cover. And the earlier in the season, and the cooler the weather, the less chicks she should have to care for.

One argument against brooders by persons who have never tried them, is that it is too much trouble to take care of them that way. And they point you to the hen which runs with her brood and cares for them herself. All you have to do is to throw the chicks a little feed occasionally and "the hen does the rest." Old prejudices are hard to overcome. It is harder to unlearn than to learn new and sensible methods. I used to be just as prejudiced against brooders as any one. For years I used the hen both as incubator and brooder—to hatch the eggs and raise the chicks. And when at last I did try the incubator and the brooder, the latter gave such great satisfaction and was such an improvement and advantage in every way over the hen method that I adopted it with pleasure, and now I would not think for a moment of allowing my hens to run with the chicks. When a hen hatches I put the chicks in the brooder and immediately reset her. After she hatches the second time I put her in the breeding pen. After she lays her second clutch of eggs and manifests a desire to incubate, I set her the same as at first, twice, allowing her to run with the last brood of chicks until she weans them. I believe nature requires this and that it is necessary for a hen to have a resting spell in this way.

The day is not distant when the brooder will be universally used, even by the person who raises but a few chicks on a city lot. In fact, it is especially adapted to the uses of those who keep fowls in cities as well as those who raise fowls on a large scale. It does not take five minutes to clean a hundred chick brooder. It takes but little oil to run one for twenty-four hours. And even with a small run attached the brooder can be kept in the kitchen or in the sitting room in bad weather without dirt or annoyance as very little room is required. When the chicks are first hatched I set the brooder and run by a window where the warm sunlight can stream in, and it is a real pleasure to see the little fellows spread out and huddle together in the sunshine. This is my testi-

mony in favor of the brooder which I think is the best device ever invented for use in the poultry yard.

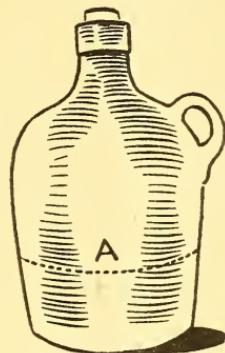
The majority of the brooders on the market are good and will give satisfaction, but the person who raises only a few chicks can make a brooder at a cost of less than a dollar. A kind that I have frequently used and which answers all requirements, is constructed as follows: Take a cracker or a soap box or any box of a similar size, knock off the front board and put a glass in its place that can be slid up or down. Then get a flat gallon jug and take a



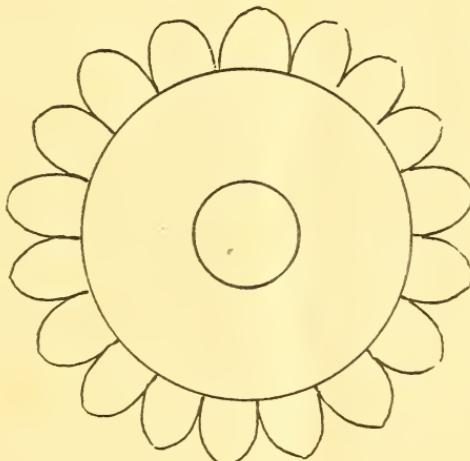
BROODER BOX.

thick pasteboard or thin pine board and cut a hole in the centre so that it will slip from the bottom up on the jug to the dotted lines. This is called the mother. Line the inside of the mother with canton flannel and allow it to sag or hang in folds. Then take a strip of the flannel and notch it as indicated above and tack it to the edge of the mother all around, placing the mother up on the jug just far enough so that the fringe will just about, or nearly, touch the bottom of the box. Fill the jug with hot water, fasten on the mother, set it in the box and your brooder is complete. Push it to one side so that one end of the mother will touch the end of the box. The mother, or hover, should be made an inch

or two smaller than the width of the box, which when placed against the end will give the chicks a foot or so space to run around in and for feed. The jug must have a piece of flannel cloth bound



around it firmly so that the chicks will not be crowded against the hot jug. Filled with boiling water the jug will keep hot all night, or warm enough for the chicks. If you have a fire place



take the cloth off the jug and set it before the fire, then the hot water will keep hot. If not, you can set it on the stove or fill it from the tea-kettle.

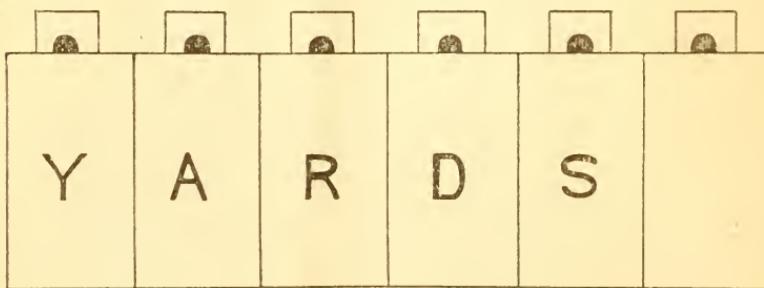
This brooder has the advantage of being cheap, free from lamp smoke and smell of oil and can be cleaned in a few moments. If necessary, a sliding door can be made in one end of the box and a small run attached where the chicks can be fed, and also be placed out of doors if the weather be warm. It will hold 25 or 30

chicks and be large enough for them until they are large enough to transfer to a larger box. I have taken chicks from hens as soon as they were dry, placed them in the jug brooder and reared them successfully with little trouble. If the weather be very cold it will be necessary to place the brooder near the fire. However, this brooder is not intended for winter weather but for early spring use. Yet I have kept chicks in the jug brooder during some cold nights. In this instance there was a fire in the fireplace all night and the brooder was placed in front of it. This is essentially the poor man's brooder and it will do good work if handled intelligently.

Caring For Sitting Hens.

I will presume that all know how to set a hen; but I know that all do not know how to take care of a hen after she is set. And yet it is simple—just as simple as the rest of poultry culture when rightly understood and sensibly managed. The hen that steals her nest out under the hedge or under the barn or in an old stump or by the side of a log in the bushes, needs no looking after and generally hatches all the fertile eggs and brings the chicks home to be fed; instinct teaches her this. But the hen or hens which are set by the owner, need some attention. And I give you a plan which I have tried successfully so that you can set a dozen hens and manage them with little trouble or worry.

Place say twelve boxes, the kind you intend to use for nests, this way and surround them with lath or wire fence four or five feet



high. You see the boxes are all *outside* of the yards except the front end where the hen goes in and out. On top of the box have a lid hung on hinges so that you can examine the eggs when the hen is off the nest, to see if any are broken and the nest smeared with the contents. If such be the case, wash them off in warm water,

wipe dry, and replace them in the nest. If the nest is soiled, clean out the old hay or straw and put new in its place. In the yards, place water and feed in the boxes or troughs, and see that they are kept well filled. Dust the hen well with insect powder at least once a week and sift a handful of sulphur and insect powder in the nest among the straw. Before setting the hens it would be advisable to give the inside of the nest box, and the outside too, a heavy coat of whitewash. Do not trouble the hens while sitting, and do not handle the eggs unless they need cleaning as above described. Never allow the hens outside the enclosure until they hatch. After they hatch the first time, reset them. This is all there is to say about setting and caring for the hens. Simple, isn't it? When the chicks hatch place them in a brooder, as described elsewhere, unless you prefer them to run with the hens, which is poor practice.

Feeding Chicks.

Next comes feeding the chicks, which should be done in a sensible way, and I give you my plan: There is more humbuggery and nonsense written about feeding chicks than about anything in the poultry culture, unless it be curing poultry "diseases" so-called. And here let me remark that I do not claim my plan to be *better* than some other breeder's plan, nor my way of managing fowls any better than the management of other experienced breeders. And remember, too, that the ideas herein contained are *my own*; they are based on long experience, and they in no wise conflict with the teachings of others because not in comparison.

For 36 hours after my chicks hatch I give them nothing. Then I first feed dry, light, wheat bread crumbs. The second day after they begin to eat, I give them crumbled corn bread, and allow them water to drink. I continue the johnny cake feed until they are a week old, and give them then in addition dry pin-head oat meal. On this food *alone* you can raise your chicks until they are large enough to care for themselves.

Chicks will eat other things if given them. They love boiled potatoes, rice, cooked or raw meat, sweet or sour milk, vegetables, in fact anything in the shape of food is relished by them. But these things are not necessary and can be dispensed with. Milk is good for chicks when a month old. If you have it, give it to them. But it is not necessary to *buy* milk especially for fowls.

Milk is good for grown birds also, and I recommend giving it to them every day if you keep cows and have the milk to spare.

I lived for a number of years close to neighbors who kept both common and pure-blood fowls, and watched their methods of feeding. Hardly a day passed but that I saw their chicks and especially those of the neighbors who lived each side of me. And they fed their chicks from the start on *corn meal* mixed with milk or water, and their chicks thrived and were as healthy and grew as fast as mine did, although I fed them *on theory*—on the various approved foods set down in the regulation diet for pure-blooded fowls! When their chicks got large enough they were fed on cracked corn and perhaps some wheat, and if they got anything else they had to scratch for it. I am convinced that sweet, fresh corn meal mixed with water or milk, is as fine a food, as nourishing and as wholesome as any food that can be given chicks after a month old. Of course it is better to give some wheat along with it, and oat meal if obtainable. But nine-tenths of the fowls raised by farmers are fed on corn meal dough from the time they are hatched until large enough to eat corn, and they certainly thrive on such food.

The reader can draw his own conclusions from this. But, if he is skeptical as to the use of corn meal dough, he can easily test the matter and forever settle the question, so far as *he* is concerned by practical experiment. Let him take a certain number of chicks at a week old or a month old, and put them in separate yards, feeding one lot on corn meal dough, grits and johnny cake. The other lot may be fed on anything and everything he may wish to give them *except* the corn meal dough and johnny cake. Continue for three months and note the result. The chicks need not be confined but may have free range unless the yards are very large. If all of one breed or variety, they should be marked with leg bands to distinguish them during the feeding experiment process. This trial will give the beginner a lesson much needed, a practical experimental lesson in feeding. I *know* the result but want the amateur to get the result for himself, so that it will be entirely satisfactory.

In feeding corn meal dough, do not make it sloppy or mushy, but wet it just enough to be crumbly so that it will "ball up" under pressure of the hand but break to pieces if thrown on the ground. Sometimes the meal may be scalded and allowed to cool before using. The johnny cake may be mixed up with either

sweet or sour milk or water and baked. Or the same kind of corn bread used on the table may be given the chicks which, for the first week, should be fed every two hours, giving them just enough to be eaten up clean. Do not feed dough that has become sour. The board that you feed on, or the dish or the trough, must be kept sweet and clean also.

This finishes the feeding lesson. Study it well. I do not insist that anyone shall follow my way to be successful. Try all the methods if you want to, but give my plan an experimental trial with the rest.

Feeding Grown Fowls.

I feed grown fowls corn, wheat and oats the year round. A little corn every day in summer, say one quart of corn to four quarts of oats and four quarts of wheat. As the weather grows cooler I feed more corn and in winter I feed half corn or a peck of corn to half a peck of oats and a half peck of wheat. Sometimes I steam the oats to give bulk and sometimes steam wheat, oats and corn altogether; perhaps once a week in winter. I never give steamed food in the summer. I never have fed a grain of bone meal, nor have I ever given my fowls egg powders, condition powders, Douglas' mixture, tonics, or any preparation to "make hens lay" simply because such things are unnecessary and are only intended to put money in the pockets of the men who make them. And some of the dealers who put up these preparations never bred a fowl in their lives, and are densely ignorant on the subject of poultry culture.

During the winter, meat is relished by fowls but it is not a necessity. Occasionally I buy livers and lights, cook them and chop them up for the birds. But fowls will not eat meat in the summer when worms and insects are abundant. Meat is a *food* and I am of the opinion that when it can be bought cheaply it is a good plan to give it often. Yet I have kept fowls an entire winter without giving them a particle of meat, and they thrive as usual.

There is no doubt but what meat will stimulate egg laying. I have tested this satisfactorily. But it is a question whether or not it is really profitable and judicious in the end, to stimulate and force laying out of season. If fowls are kept laying during the winter they will not lay so well in the spring, nor will their eggs hatch such vigorous chicks as if they had not produced eggs in the winter, because being overtaxed and stimulated to lay out of their

regular season the organs of generation are weakened and the vitality of the egg germ reduced materially. This is my experience.

Fowls which have free and unlimited range are never injured by feeding corn in any quantity. And especially is this true with reference to the non-sitters the Leghorns, Minorcas, Andalusians Spanish, etc. And young and growing Cochins, Brahmas, Plymouth Rocks and Langshans will consume a surprisingly large amount of corn without taking on fat because the food they eat is taken up in making bone, feathers and the constituent parts of their bodies. But when fully grown and developed, after a year old, it is not a good plan to feed the heavy breeds too much corn, as they get fat and lazy and are inclined to do little scratching. Give them corn enough to keep them in condition and no more. In very cold weather the feed may be corn entirely as long as the extreme cold spell lasts.

Corn is *the* food of American civilization, it is *the* food for fowls. I do not know what cereal we should miss so much. We could dispense with any or all of the cereals easier than with corn. Better have all the grains blotted from the list than corn. Corn feeds our fowls and fattens them; makes our beef and pork, and is the muscular ration of our horses, mules and oxen. And corn furnishes daily food for thousands of families in every state of the Union who eat corn bread and hominy as a regular diet and thrive and grow robust on it. Corn in the roasting ear, and dried corn, is the food of the Indian. Corn is wholesome prepared in any way. The human family could subsist on it if there was no wheat in existence. It is the principal food of the Southern negro and very many of the whites have it on their tables three times a day, and all the natives eat it at least once a day. No greater misfortune could befall a Kentuckian than to deprive him of his corn pone. The rich eat it; it is the main reliance of the poor. Corn is the King of grains. No other grain could possibly take its place.

This is my testimony for corn. And it is the truth every word of it. How foolish to assert that corn is not a fit food for fowls, or that it is injurious to them! The fact is, fowls could not be successfully raised in America without corn. True, we could manage to get along without it if compelled to, but the profits of the industry in general, and of the large establishments in particular, would be very much reduced if a universal and total failure of the corn crop should take place. Feed corn! Feed it intelligently! But don't fail to feed it!

Curing Diseases.

In another place I have given my idea about drugging fowls. Perhaps, however, the reader will ask, don't you believe in treating fowls when they have a disease? In reply I maintain that fowls never have *diseases*. I do not believe that roup, gapes, diarrhoea, cholera and limber neck are diseases any more than the itch, the measles, mumps, whooping cough, etc., etc., are diseases of the human family. Consumption, chronic liver-complaint, and a few other afflictions may be properly classed as *diseases*; but a fowl with a disease is a rare sight. Parenthetically, I mention that bronchitis in fowls is the nearest approach to *disease* that I know of, for I have had young chicks afflicted with bronchitis which grew up to be a year or so old, to finally die with the affliction. I kept these birds not for use but for experiment. And I have noticed that when a fowl contracts bronchitis, it will cough or sneeze as long as it lives. At least that is my experience. Roup and lice are two of the most serious evils poultrymen have to combat. And I make the assertion that I have never yet found a remedy for roup or for chicken cholera. Sometimes a bird gets well in spite of the doctoring it gets and then we proudly claim the honor of the cure, and we think we have found a sure remedy. When the next fowl gets sick, we use the same remedy and the bird dies. So that a medicine or treatment which will cure one fowl will have no effect on another fowl. Taking this view of the case, I have come to the conclusion that doctoring sick fowls does not pay; it is time thrown away. And fowls that have to be nursed and doctored all the time are not worth keeping. Now, I do not believe that a fowl which has the roup badly ever gets over it. I have never had one that was of any account after having this loathsome disease. I once shut up two fowls, which had the roup, in a small out house. Head all swelled up, eyes closed, beak half open and water running from the mouth and eyes. It took a strong stomach to attend to those birds, as the smell emanating from them was horrible. After doctoring them for a week they both died. And right then and there, I made a vow never to doctor a rousy fowl again. The ax or hatchet is the safest, surest and quickest means of eradicating the affliction which must be more or less contagious. Afflictions are contagious. Diseases, never.

Gapes I cure with turpentine. And I never have failed

with it. I mix a teaspoonful of turpentine with a quart of corn meal dough and feed once or twice a day. The chicks badly afflicted should have their throats swabbed out with turpentine as often as necessary, using a feather for the work; often one operation will effect a cure, so I keep a bottle of turpentine on hand all the time and have banished all other so-called "cures" from the house.

It is a well known fact among breeders, if not known by the public, that our pure breeds are lacking in stamina and hardiness; that while they are becoming finer in feathers, they are degenerating in physique, vigor and health. This I attribute to close in-breeding and breeding for the show room, instead of breeding for health, vigor, stamina and general vitality. "We are," says a learned man, "becoming, or have become, a nation of dyspeptics." Just so! And we are becoming, or have become, a nation of sick-fowl doctors. With our pernicious system of drugging, drugging, drugging in the poultry yard, our breeding for feather at the expense of vitality, we are raising sick fowls—birds born sick and tired—birds that do not last long and are of not much account while they do last. Confinement in close quarters, in-breeding and drugs are doing the work. I do not say there are no hardy, vigorous fowls, without tainted constitutions and liability to disease and various afflictions that visit poultry yards. To the contrary there are vigorous breeds not liable to disease, and there are breeders who give their fowls unlimited range and who do not use drugs, who have hardy birds. In my boyhood days there were no medicines for fowls for sale as now. And there were no afflictions, or few, in the poultry yard. If civilization makes nations wiser and physically weaker, so breeding for feather exclusively must make fowls much weaker and their owners some wiser. Let us pause and reflect. Let us breed for feather but let us not sacrifice vitality, stamina, hardiness and all that goes to make the vigorous, useful bird in the foolish endeavor to get "show birds." Let us change our methods. Let us kill our sick fowls and not resort to drugs that do not cure. Let us not patch up rouny and afflicted fowls, breed from them and so produce other fowls with no vitality. I believe if every breeder in the land would kill their afflicted birds and not breed from them, that in five years' time our fowls would be hardier, more vigorous and in better condition everyway.

Every Day Duties.

There is food for reflection in the scope of "every day duties" which is here presented and which must be attended to if we expect even ordinary success with fowls. The roseate views and brilliant pen pictures of fowl culture so often seen in print, are written in the main by persons who have had little or no experience in poultry raising, except perhaps the keeping of half a dozen fowls for pleasure. Drunkards write brilliant essays on temperance, and libertines dilate on the beauties of virtue. And there be theorists and theorists—theorists who write merely from imagination, never having had any acquaintance, practically, with the subjects they write upon. And so it is, I am sorry to say, that theories have crept into our poultry literature, which have resulted in harm, and led the beginner astray in various ways. There is, perhaps, no business on earth which requires such intense and constant application in all its details as the poultry industry if followed as a business. And if a man has three, four or half a dozen or more yards to attend to and does any other business, he will have to get up very early in the morning and work late in the evening to attend to their wants. And if he raises a lot of chicks it will keep him on the jump to see to them in time to get to his place of business. More than this he will have to have the aid of his wife to look after the fowls in his absence. If she be a woman who loves fowls she will deem it a pleasure to attend to them and she will do it well for when a woman gets interested in fowls, if she does not kill them with kindness she at least does not let them want for feed and the best of attention. But if the wife does not love fowls and thinks it "drudgery" to take care of them, then the man must confine himself to one yard, or trust to the hired man. If he is forced to do the latter, it won't be long before he discovers that he has made a sad mistake and the fowls not dead will be quickly disposed of. This is my experience. Others can tell the same story. Now the man with a hundred fowls to care for will be kept just as busy as though he had a thousand. In fact, the person who is fixed for it—and right here is one great secret of success—can care for a thousand fowls easier than the man with a hundred, especially if the hundred comprise several breeds and varieties. However, to the true fancier—the man who loves fowls—the work is usually a pleasure, a healthful pastime and relaxation from routine office or shop duties. Below I give an outline of

every day duties for the consideration of amateurs and those intending to join the army of poultry breeders. These duties are imperative. They cannot be put off until some other day. Rain or shine, wet or dry, cold or hot, in stormy or calm weather, and *every day* must most of them be attended to. And I have not mentioned *all* the little details which make the sum total of the poultryman's daily lesson or task. To shirk these duties means failure, loss, discouragement and a reiteration of the oft-repeated cry, "poultry raising don't pay!" Read carefully, commit to memory and paste away for future reference. It will be seen that the breeder who attends to his fowls does not have time to loaf and spin yarns at the corner grocery.

1. Look for lice and mites.
2. Feed grown fowls and water them.
3. Feed chicks and water them.
4. Clean poultry houses.
5. Look for lice.
6. Paint roosts with kerosene, carbolic acid and other agencies to destroy vermin.
7. Clean water fountains. In warm weather they should be rinsed every morning with a little ammonia and water.
8. Examine chicks and grown fowls for lice.
9. Keep poultry houses whitewashed.
10. Change straw in nests and clean them out.
11. Look after sitting hens, see that they have water and feed, see that there are no lice on them, see that no eggs are broken in the nests. If broken, wash carefully with warm water and wipe dry with a clean cloth.
12. Clean out the coops your young chicks are kept in, and dust the ground with air-slaked lime. Keep them whitewashed.
13. Look out for sick or ailing fowls. When you see one sitting around droopy or sleepy, look for lice and exterminate them. If the fowl is sick, treat it according to the nature of the affliction.
14. Gather the eggs, mark them, stand them on end and put in a cool place.
15. See that the young chicks are fed half a dozen times a day, that they have fresh water and are out of the way of hawks.
16. See that the chicks are all safely housed at night out of danger from storms or mid-night prowlers.
17. Look for lice and mites.
18. Know every fowl on your place, big and little, and make it your business to see every one of them each day.
19. If you ship eggs see that you have baskets on hand so as to ship at short notice.
20. Have coops always ready to ship fowls in and keep your exhibition coops in repair.
21. Look for lice.
22. See that you always have feed on hand suitable to the needs of each variety.
23. Answer correspondence as soon as received. Never put this important matter off. Prompt correspondence goes a great ways in all kinds of business.
24. Keep a daily record of the number of eggs got

from each pen, as well as a record of the number of eggs set and hatched, the number of eggs sold and price, the number of eggs bought and the number of chicks sold. In fact detail your business and do it systematically. 24. Keep account of all expenses of all cash paid out and all cash taken in. Look out for lice. 25. Personally attend to these things yourself and never trust another to do it unless you are forced to do so. Especially never trust your fowls to the care of an inexperienced person. None of these things are discouraging. They simply mean work, and excellence is only attained by labor. And all the duties above enumerated must be attended to whether you raise fowls for pleasure or profit or both. And they will be heavy or light according to the number of different varieties you keep, and the number of yards to be looked after.

Poultry Shows.

Next to poultry journals and poultry literature, there is nothing that will create such an ardent desire for thoroughbred fowls as the poultry show, whether it be exclusive or as a country fair attachment. The first visit to a poultry show is a revelation to the average man he never forgets. There is where he takes the "hen fever" if he is at all susceptible to the contagion. He may read poultry journals for years and never own a pen of fine birds. If he is a business man he reads them, perhaps, mechanically, lays the journal down with a yawn, and exclaims: "Yes, nice birds, but I really haven't time to fool with chickens. Guess I'll go to the Ducktown poultry show, though, and see what they look like." And he goes; takes his good wife and children and contracts a case of hen fever he never recovers from. At first he tries to figure out how much it would cost to buy the whole show because he wants everything in sight. The lordly, grand, majestic light Brahma catch his eye first, and he puts them "on the list." And, parenthetically, I remark that no bird in the show room looms up like the light Brahma in the eyes of an amateur, and even veteran breeders are charmed with their contour, embonpoint and, withal, symmetrical proportions. Next the barred Plymouth Rocks catch his eye, and he must have a pen of them. Then the brown Leghorn with their rich coloring and graceful, proud carriage, goes down on the list. And so he flits from coop to coop thinking each the prettiest. He wants buff Cochins and can hardly

ly afford to go away without purchasing a few of those lordly Langshans. The black Spanish, blue Andalusians, Minorcas, Red Caps, silver Hamburghs, Polish, etc., etc., he is in love with and when Eddie says, "Oh, papa, I want them Bantams," or little May exclaims, "Papa, dit me some of them 'ittle chickens," he tails off his list with a pen of Japanese or Sebrights for the children. But when he comes to figure up the cost and wonders where on earth he is going to put all the fowls on his list—his contemplated purchases—he concludes not to buy over six varieties. He walks about, talks with his wife, meditates again and then asks, "Eliza, do you think six coops of them birds is enough for us? Lets see. I've selected light Brahmans, Plymouth Rocks, brown Leghorns, buff Cochins, Langshans, silver Polish and Japanese Bantams—seven, by jove. Do you think that is enough?" "Enough," exclaims his wife. "Why, Charles, are you crazy? We can't run a poultry establishment here in town. We haven't even got a chicken house. We might manage with half a dozen, and a trio of Bantams for the children, but not one more." And so, finally, after much thought, he settles on one pen of light Brahmans and a trio of Bantams, pays for them, and orders them sent to his house. He is awfully sorry he could not buy the twenty or thirty varieties down on his list, but he would fix to do so by next year certain. For the present he puts his pets in the wood house, and then gets a carpenter to erect a chicken house after some model in the poultry books. And all his spare time now is employed in looking at his fowls, which he thinks are just a little finer than anything in that section. He purchases "patent food" as well as "powders to make the hens lay," buys oyster shell, bone meal, and animal meal, etc., etc., and figuratively "kills his birds with kindness." Of course, he learns better in time or rather he unlearns. If he is a born fancier, and the love for fowls is innate, it grows and enlarges with experience; but so long as he lives he is a fancier if he keeps fowls for pleasure, a breeder if he keeps fowls for profit. And if he keeps them for both profit and pleasure, he is a fancier and breeder in one. There are hundreds of breeders who are not fanciers. The simon-pure fancier is hardly ever a breeder in the general acceptation of the term.

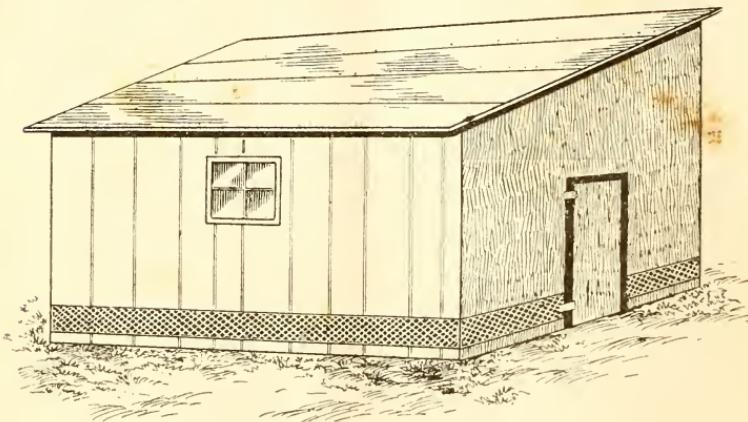
The poultry show, big or little, is an educator and should have all possible encouragement. Of course, it has a commercial side, where the huckster gets in his work and takes prizes and honors not his due, but I am inclined to believe that the time is coming

when the huckster will be eliminated, and no fowls allowed on exhibition which were bought for exhibition purely, thus robbing the breeder of his just dues and placing honors where they do not belong. I think every state should have an association, and every county an association, and each county should have an annual poultry show after which the state association should be held. I know this means work but when once started the thing is comparatively easy. Three persons in a county can form the nucleus of an association and when the first county fair is held each succeeding show will not only be easier to get up but will be larger, more interesting and more profitable. And especially is the county poultry show a necessity for small breeders who cannot afford to attend the big shows at a distance, yet who have just as good birds as can be found anywhere; in fact, as a rule, the small breeders have better birds on an average than do the so-called big breeders many of whom are not breeders but who buy up fowls by the cart load at cheap prices and swoop down on county fairs and small shows and overshadow the whole show by quantity if not quality. And I know that when the time of the winter shows approach there is a mighty hustling about by some of the so-called large breeders, who buy winners of the small breeders, men who make a speciality of one or two breeds or varieties. If I want a particular breed I go to the specialist in that breed and not to the man who advertises forty varieties. The small breeder has few fowls but they are usually good ones. He keeps them because he loves them and as a side issue. He is probably a business man, clerk or mechanic. If he makes their keep or a few ducats extra well and good; if not it's all the same. He is bound to keep fowls whether he loses or gains by it but he cannot afford to attend the big shows, and for this reason the county show comes in handy. He is certain to be there, and the chances are that half the people who attend the county show but who never raised fine fowls will become purchasers of the fowls at the show or of eggs later on. As an auxiliary to the state association shows the county show is just as necessary and as valuable as the primary school is in relation to the school of higher grade.

Poultry Houses.

The design given for a poultry house here may be followed or altered and improved upon at the option of the reader. Location and climate has all to do with the erection of a house for fowls. At the North, poultry houses must be tight and warm for winter, and with no ventilation because it would be folly to admit

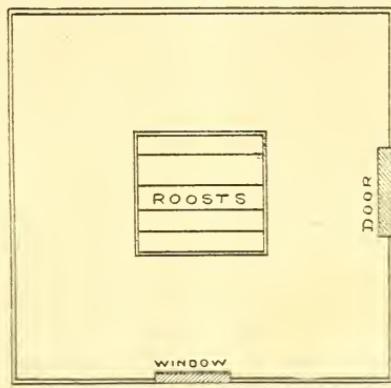
cold air to a poultry house with the thermometer below zero. During the warm days of winter the sash could be opened in day-time to ventilate the house. But at night when the mercury drops the poultry house would need to be tight just as your reading room or sitting room or sleeping room, is tight. And as there are no air tight rooms in poultry houses it must be admitted that fresh air *does* get in and circulate and that the fresh air expels the foul air, if there be any in very cold weather which I doubt. At the South the poultry house needs to be just as tight as regards draughts as at the North, for there is a great deal of very penetrating, damp, cold air in circulation during the winter months, and although mercury does not get as low as at the North the cold is felt just as severely while it lasts. This is the testimony of all northern residents. Then the changes of temperature are sudden and severe which makes the cold felt all the more keenly. And while fowls need protection from cold winds and draughts, a tight house, in the general acceptation of the term, is not needed in the South that is, tight on four sides. My plan for a southern house is as follows, and combines all the qualities of tightness with a free circulation of air. I call it the "Bottom-Ventilated House"



DAVIS' BOTTOM VENTILATED POULTRY HOUSE.

The above house is 10 x 10 feet square, 5 feet high at back and 6 feet high at front, boarded up and down and battened, tar paper roof and lined with tar paper which is *white washed* on the inside and outside. The bottom ventilation consists of a strip of $\frac{1}{4}$ or $\frac{1}{2}$ inch mesh wire around the bottom of the house on all

four sides. The perches for roosts are wood, square, and placed in the centre of the house, thus: A dropping board slanting down



GROUND PLAN OF HOUSE.

the four sides with a strip at the ends to keep the droppings from falling to the floor and nest boxes under the dropping board, completes the interior arrangement, which is cheap, simple and will answer the purposes. The perches must be made to suit the number of fowls kept. And the house may be made larger or smaller as required. The merit of this house is its extreme simplicity and perfect cleanliness. Five minutes work will remove the droppings and sweep the house. And any person can build such a house in half a day. If the reader wishes to see different plans, I recommend "Low-Cost Poultry Houses" published by the Fanciers' Review at Chatham, N. Y.

Brooding Houses.

On page 22 plans will be found for sitting hens but if a house is preferred, the same precautions should be used to insure perfect safety for the eggs. Hens set together in a room will get off for food and then insist on getting on a nest with another hen. A fight is the result. The eggs are smashed and perhaps the entire hatch is ruined. A sitting hen is blindly foolish. She seems to know nothing whatever of the locality of her nest when set in a house with a lot of other hens with full liberty to go where they please. But if there is only a simple nest the hen is at no loss to find it, whether it be outside in a brush patch or in any other locality. I once set 24 hens in a house, making the nests around on the four sides. In the middle of the room I placed a dust bath containing road dust, ashes, sulphur and insect powder, and near by the water and feed box. Under each of the hens I placed 15 eggs and out of the 360 eggs set I did not get 100 chicks, or about

four to the hen. Such fighting and quarreling over nests; such mashing of eggs and bad work generally, I never experienced. But I had no other place to set them. Not a day but what I removed broken eggs from some of the nests. Not a day that I did not have to clean out some nest and wash the eggs. Not a day but what I found two and sometimes three hens on a nest. Once or twice I was on the point of killing every hen in the house and throwing the eggs away for I was tried and annoyed as I never had been before with sitting hens. And they had no cause for such work except pure meanness. But the only wonder was that I got any chicks at all. All this happened after I had been breeding fowls for years. My plan before that had been to set a hen here and there wherever I could find a good place for a nest and I always had fair hatches. But I concluded to try the above plan and I am glad I did. But I only tried it once.

So I say to you, reader, if you do set a lot of hens in a house, follow the plan given on page 22 enclosing each hen in a fence from which she cannot escape until she hatches. This is the only *safe* plan. Two or three hens may sometimes be set together with safety. But my advice is, don't do it. It is risky, especially if the eggs are valuable ones.

Fences.

A four-foot fence whether of wire or lath, is sufficient to restrain the Cochins, Brahma's or Langshans. A five-foot fence will be needed for the Plymouth Rocks, Wyandottes and Javas, while a nine-foot fence will hardly restrain Leghorns, Andalusians, Minorcas, Houdans or any of the lighter non-sitting varieties. Clip one of the wings close on each fowl and they will not get over a five-foot fence. In fact I have kept Leghorns, Minorcas and Houdans inside of a four-foot fence and never had them get out. But clipping the wing is objected to by some, who pull out all the flight feathers of one wing. But the feathers grow out again and have to be pulled occasionally. I prefer clipping the wing, which is the safest and surest. The non-sitters which have been born and raised in yards rarely attempt to fly over even a low fence. Like canary birds they seem to be perfectly satisfied with their place of abode and they think they could not get over a fence if they tried. But the birds which have had free range are the ones that are difficult to keep within bounds and the only way to keep them in is to have long narrow runs and cover the top with wire, unless their wings are clipped and even then they often get out. We have seen Leghorns, with their wings clipped, get over a nine-foot

fence when frightened. As a rule, however, birds with their wings clipped soon quit trying to climb and are easily restrained.

Any of the large breeds may be kept profitably in small runs, but my experience is that Leghorns, Minorcas, Andalusians and in fact all the non-sitters, with the possible exception of the Houdans, do not thrive in small yards and that they cannot be kept with profit unless they have full liberty, or very large yards, comprising an acre or so for 25 birds. I have had the best of results with Houdans in a yard 20 by 30 and I will say for this splendid fowl that it is one of the best layers I have ever handled; it is gentle very domestic and remarkably fine for the table. I once purchased 20 Brown Leghorns from a man who had kept them in a yard for nearly a year but he got no eggs, although they were fed properly. I gave them full liberty to run where they pleased on a 40-acre lot and in a little while they commenced laying and laid right along for months, yielding a wonderful quantity of eggs. When possible give your non-sitters free range and keep them as little as possible in yards. None of the non-sitters are fit to keep on a city lot if any profit is wanted. But a small number say half a dozen, of any of the larger breeds can be kept on a city lot with profit.

To Break Up Broody Hens.

Put the hen in a coop with a cock or cockerel for a week and she will be entirely cured. This is the easiest, best and most sensible method and no cruelty attaches to it. I had tried all plans known before discovering this plan and I find it most effectual. It is best however, when it can be done to let a broody hen sit. It is a requirement of nature. If you break her up she only lays a few eggs before she wants to sit again and she will continue this way all through the season until moulting time and really be of little value. Allow her to hatch one or two broods of chicks and she will be all right and doing good work in the egg business in a little while. I have had hens laying right along while running with chicks (before I used brooders.) Nature requires that hens have periods of rest, and incubation gives the rest needed. Never use harsh measures to break up a broody hen. The plan advised above is the humane one.

Old Birds and Young Birds.

Never allow the old birds and young birds to run together. Do not allow them to roost together. Do not feed them together. Fowls are naturally ravenous. No difference how often fed they will fly after the food and pounce down on it as if they were starv-

ing and act as if it were a fight for life. In these scrambles for food the younger and weaker birds are trampled on and otherwise abused. Besides, the larger and stronger birds get the greater portion of the feed and the breeder will be unmindful of the fact that some of his birds are starving in the midst of plenty. I am firmly of the opinion that runts and scrubs owe their origin wholly to the pernicious system of feeding big and little fowls together; old and young, all in the same yard. This is an important lesson to learn. It took me years to get it by heart. You can profit by my experience in this, at least.

Now *why* should there be scrubs in poultry yards? You have a pen of Langshans. The cock scores 94; the hens score 92, 93, 94, 95, 95½. Now *why* should not *all* the chicks from this high-scoring pen be good birds? Why should there be a scrub among them? There should *not* be and there will not be if they are fed properly. Of course there will be culls. But culls and scrubs are widely dissimilar. Culls are the birds breeders set apart for sale after they have selected the cream of their stock for breeding purposes in their own yards. I have seen some very fine culls but never a fine scrub. A scrub is of no use whatever. It is not even fit to eat. From the pen of Langshans, or any other breed, scoring as above noted, the birds should all be good. Some would not of course be as fine in points as others and would not score so high, yet there should not be a scrub in a lot of 100 chicks and there would not be if the chicks were fed systematically, and properly. I *know* this from experience.

Chicks of different ages should be fed *separately*. Remember this. Some trouble to do so? Certainly. But how are you going to succeed in raising fine birds without work? And right here is the point where many fail. It is easier to feed a lot of young chicks of all ages together than to feed separately. Have yards or places where each brood can be fed by themselves. A difference of a few weeks in age will not matter much. But do not feed chicks a month old with those three months old. Do not feed chicks three months old with those six months old or the six months old birds with grown fowls. And never on any occasion feed young and growing chicks with grown fowls. If you do, scrubs will be the result as the older birds get all the food and you may be ignorant of the fact.

BREEDING FOWLS ON A LARGE SCALE.

Don't attempt it unless you have plenty of money and can afford to sink a few thousand dollars and your time, besides. Don't

believe the rosy-hued pictures on paper about the big profits in poultry raising. More, *many more*, fail than succeed with big establishments and the man who starts into this kind of business must be equipped with staying qualities and work perhaps at a heavy loss until finally successful, if success be possible with *him*. A man may succeed well with one breed or half a dozen varieties but fail with a big establishment. Experience with poultry does not count so much here as *management*. The poultryman must be a thorough-going business man in all that the term implies. He must know *how* to buy and sell and *when* to sell for the most profit.

I do not wish to discourage anyone from going into the business on a large scale. My aim here is merely to warn, and point out the breakers. The fact that a few large establishments are a success is proof that success *can* be attained. I have often wondered why there was not at least one large broiler farm and one or more large egg farms in every state. But there is not. The large establishments are confined to the Eastern and New England states where the markets are universally good and demand constant at average fair prices. Profits on paper are seductive. They look enticing. And there is nothing more easy to do than to figure out the profits on ten hens and multiply this profit a thousand times or by a thousand hens. "If one hen will pay a profit of \$2.50 a year," asks the novice or even the breeder with some experience, "will not a thousand hens pay a profit of \$2,500?" They ought to. We admit that. They certainly ought to. But will they? But suppose they pay a profit of \$1,000 only. Can a man make that in any other business with the same amount of capital invested? If we compute cost of fowls, poultry houses, feed, the breeder's time, etc., for a year at \$2,000 and the profit at \$1,000 he gets *forty* per cent interest on the sum total! I do not say there *is* a dollar per head profit in a thousand-hen ranch or even fifty cents per head profit, but when we figure up profits *on paper* the thing looks so plain that almost any school boy ought to be able to manage it. Hundreds, thousands, of these big hen ranches with big profits have been mapped out on paper only to prove dismal and disastrous failures. And yet I honestly believe a thousand hen ranch can be made to pay handsomely if run on business principles. And while I believe I can plan and map out a way—different from any I know of—whereby success may be attained with a thousand hens, the thing might prove a failure.

In "The X Y Z of Poultry Culture" I shall give such plans and discuss such other things in poultry keeping as will be of general interest.

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